# Abstracts

## Field Distribution and Dispersion Characteristics of Fundamental and Higher-Order Modes in Miniature Hybrid MIC (MHMIC) Considering Finite Conductor Thickness and Conductivity

*K. Wu and R. Vahldieck. "Field Distribution and Dispersion Characteristics of Fundamental and Higher-Order Modes in Miniature Hybrid MIC (MHMIC) Considering Finite Conductor Thickness and Conductivity." 1991 MTT-S International Microwave Symposium Digest 91.3 (1991 Vol. III [MWSYM]): 995-998.*

A hybrid-mode analysis of coplanar transmission lines on 10mils alumina substrate with lossy back metallization is presented. A self-consistent approach is used together with the method of lines (MoL) to determine the propagation constant, losses and field distribution considering finite metallization thickness and conductor losses. Results are given for the fundamental and first two higher-order modes. It is demonstrated that the onset of higher order modes limits the frequency range of conductor backed CPW's.The method presented is general and can be used in the analysis of Miniature Hybrid MIC's (MHMIC) and MMIC's and can include also semiconductor losses.

❑ Return to main document.